

## Women at Risk of HIV Infection

March 2006

### Introduction

Although HIV/AIDS was first identified in men who have sex with men, the proportion of cases among women has increased over time. Currently, 31% of people recently diagnosed with HIV infection and 29% of people living with HIV/AIDS in Massachusetts are women.

### General Statistics:

- Within the years 2002 to 2004, 857 women were diagnosed with HIV infection, accounting for 31% of all diagnoses in Massachusetts.
- On December 31, 2004, there were 4,418 women living with HIV/AIDS, accounting for 29% of people living with HIV/AIDS in Massachusetts.

### Regional Distribution:

- Within Health Service Regions (HSR), the Central region has the largest proportion of women among people diagnosed with HIV infection within the three-year period 2002 to 2004 at 44%. Among people living with HIV/AIDS, the Central and Western regions have the largest proportions of women at 39% and 38%, respectively.

Among cities with over 20 people diagnosed with HIV infection within the three-year period 2002 to 2004, the following have at least 40% of diagnoses among women:

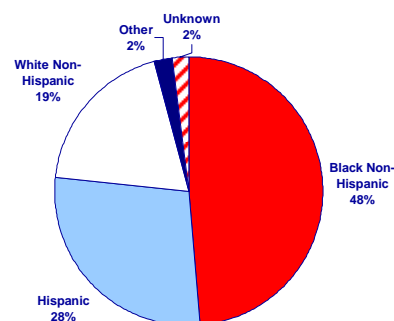
- |               |     |        |
|---------------|-----|--------|
| • Lowell      | 49% | (N=44) |
| • Worcester   | 48% | (N=78) |
| • Framingham  | 46% | (N=16) |
| • Lynn        | 45% | (N=23) |
| • Brockton    | 44% | (N=30) |
| • Springfield | 43% | (N=89) |
| • Lawrence    | 42% | (N=28) |

**NOTE:** N indicates number of women reported as diagnosed with HIV infection.

### Race and Ethnicity:

- Among recent HIV infection diagnoses, 48% of women are black (non-Hispanic), compared to 26% of men. Similarly, among people living with HIV/AIDS, 39% of women are black (non-Hispanic), compared to 23% of men.

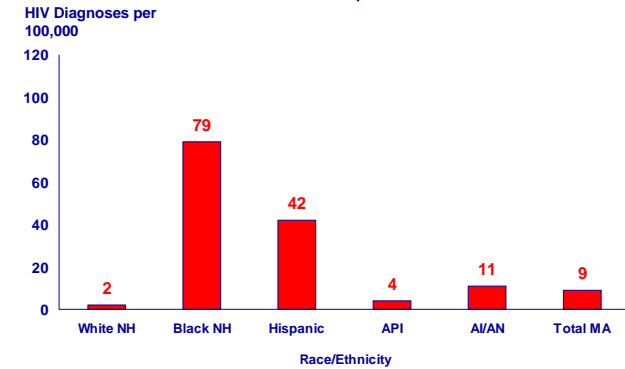
Figure 1. Women Diagnosed with HIV infection from 2002-2004 by Race/Ethnicity: Massachusetts



Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 7/1/05

- **Disparate Impact:** The age-adjusted average annual rate of HIV diagnosis from 2002 to 2004 among black (non-Hispanic) females (79 per 100,000) is 40 times greater, and among Hispanic females (42 per 100,000) is 21 times greater than for white (non-Hispanic) females (2 per 100,000).

**Figure 2. Age-Adjusted Rate of HIV Diagnosis per 100,000<sup>1</sup> Population Among Females by Race/Ethnicity: Average Annual Rate 2002-2004, Massachusetts**



<sup>1</sup> Population sizes for rate calculations are based on year 2000 population estimates from the MDPH Center for Health Information, Statistics, Research and Evaluation; NH= Non-Hispanic, API = Asian/Pacific Islander; AI/AN = American Indian/Alaska Native; Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 7/1/05

- Similarly, the age-adjusted prevalence rate of HIV/AIDS among black (non-Hispanic) females (1,023 per 100,000) is 21 times greater, and among Hispanic females (691 per 100,000) is 14 times greater than for white (non-Hispanic) females (48 per 100,000).

### Place of Birth

- Forty-one percent of females diagnosed with HIV infection within the three-year period 2002 to 2004 were born outside the US, compared to 23% of males. Similarly, 25% of females living with HIV/AIDS were born outside the US, compared to 15% of males.

### Exposure Mode:

- Exposure mode among women diagnosed with HIV infection within the three-year period 2002 to 2004:
  - 25% (N=217) heterosexual sex (with partners with known risk and HIV status)
  - 16% (N=141) injection drug use
  - 2% (N=15) other modes (including blood/blood products and pediatric)
  - 42% (N=356) presumed heterosexual sex with partners with unknown risk and HIV status (presumed heterosexual)<sup>1</sup>
  - 15% (N=128) no identified risk

- Exposure mode among women living with HIV/AIDS:
  - 32% (N=1,434) heterosexual sex
  - 31% (N=1,388) injection drug use
  - 4% (N=176) other modes (including blood/blood products and pediatric).
  - 27% (N=1,171) presumed heterosexual sex with partners with unknown risk and HIV status (presumed heterosexual)<sup>1</sup>
  - 6% (N=249) have no identified risk.

### Exposure Mode and Race/Ethnicity:

- Among **white (non-Hispanic) females**, injection drug use is the predominant exposure mode, attributed as exposures in 37% of females recently diagnosed with HIV infection and 50% of females living with HIV/AIDS.
- Among **black (non-Hispanic) females**, presumed exposure through heterosexual sex with partners with unknown risk and HIV status (presumed heterosexual) is the predominant exposure mode, accounting for 55% of females recently diagnosed with HIV infection and 41% of females living with HIV/AIDS.
- Among **Hispanic females**, heterosexual sex (with partners with known risk and HIV status) is the predominant exposure mode accounting for 36% of females recently diagnosed with HIV infection and 43% of females living with HIV/AIDS).

### Age at HIV Diagnosis:

A larger proportion of females than men are diagnosed with HIV infection in younger age groups.

- Eleven percent of females diagnosed with HIV infection within the three-year period 2002 to 2004 were diagnosed during adolescence (13-24 yrs), as compared to 7% of men, and 14% were diagnosed between the ages of 25 and 29, as compared to 9% of men.

## **Women at Risk of HIV infection**

**Behavioral Risk Factors:** According to local behavioral surveys, females in Massachusetts are engaging in behaviors that put them at risk for HIV infection.

- Among 1,202 sexually active female respondents (age 18-64) to the 2004 Massachusetts Behavioral Risk Factor Surveillance Survey, for 77% (N=937) a condom was not used at their last sexual encounter. Of these women, the main reason reported for not using a condom was being in a monogamous relationship (59%) followed by using another form of birth control (22%).
- Among 1,792 school aged female respondents to the 2003 Massachusetts Youth Risk Behavior Survey (MYRBS), 41% reported ever having sex, 2% reported having sexual intercourse before age 13, and 9% reported having 4 or more lifetime sexual partners. Among females who reported sexual intercourse in the 3 months before the survey, 55% reported condom use at last intercourse and 18% reported substance use at last intercourse.
- The proportion of school aged female respondents to the MYRBS that reported condom use at last intercourse increased from 47% in 1993 to 55% in 2003.
- The proportion of school aged females reporting that they ever had sex decreased from 46% in 1993 to 41% in 2003.

## **HIV Related Morbidity and Mortality Among Women**

### **AIDS Diagnoses:**

- The proportion of new AIDS diagnoses among females increased from 24% in 1995 to 31% in 2004.

### **Mortality with AIDS:**

- The proportion of deaths among people diagnosed with AIDS in females rose from 20% in 1995 to 30% in 2003 and then declined to 25% in 2004.

<sup>1</sup> **Note for interpretation of presumed heterosexual category:** The category of “presumed heterosexual” is used in Massachusetts to re-assign people who are reported with no identified risk but who are known to have not reported any other risks except heterosexual sex with a partner of unknown HIV status or risk. Massachusetts uses this category to distinguish these cases from other undetermined cases about which we know less. Nationally, the Centers for Disease Control and Prevention categorizes “presumed heterosexual” cases as “no identified risk” (NIR). As such, comparisons of the presumed heterosexual category cannot be made to national data. Caution should be used in interpreting data for presumed heterosexual, as it is still not clear what the exposure risk is for people in this category. Although a person may not report other risk behaviors such as injection drug use or male-to-male sex to his/her health care provider, it does not necessarily mean that he/she has not engaged in them. There are many barriers to disclosing HIV risk behaviors in the health care setting such as a limited patient-provider relationship or stigma.

### **Data Sources:**

HIV/AIDS Case Data: MDPH HIV/AIDS Surveillance Program, Data as of July 1, 2005

BRFSS Data: Massachusetts Department of Public Health, Bureau of Center for Health Information, Statistics, Research and Evaluation, Behavioral Risk Factor Surveillance System

YRBS Data: Massachusetts Department of Education, 2003 Youth Risk Behavior Survey Results

### **Additional References of Interest:**

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McClelland GM, Teplin LA, Abram KM, Jacobs N. HIV and AIDS risk behaviors among female jail detainees: implications for public health policy. *Am J Public Health.* 2002 May;92(5):818-25

Pulerwitz J, Amaro H, De Jong W, Gortmaker SL, Rudd R. Relationship Power, Condom Use and HIV Risk Among Women in the USA. *AIDS Care.* 2002;14:789-800.

*For more detailed information and a description of data limitations please see “HIV/AIDS in Massachusetts: An Epidemiologic Profile”, available online at [www.mass.gov/dph/aids](http://www.mass.gov/dph/aids)*